

REMARKS

Claims 1-16 are pending.

Claims 1 (a method claim) and 7 (an apparatus claim) are independent claims.

Foreign Priority

The acknowledgment of claim for priority is noted.

The Examiner requested a certified copy of the Israel 132708 application as required by 35 U.S.C. §119(b). Clarification of this is requested. As set forth in PCT rule 17.2(a) the foreign priority document was filed with the PCT application and thus is not required to be submitted by the Applicant in the present application.

Objection to the Specification

An Abstract of the Disclosure has been provided.

Also a substitute specification and a marked-up copy of the substitute specification are enclosed as requested.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the objection to the specification.

Drawings

The drawings were objected to. Attached is a separate letter with a copy of prints for correcting the drawings.

The Examiner is requested to approve these drawing corrections and when they are approved, formal drawings will be submitted in the time period set by the Patent Office.

**Objection to the claims**

In section 5 the claims were objected to.

The claims have been amended and it is now requested that the objection to the claims be reconsidered and withdrawn.

**Reply to Rejections****First Rejection**

In section 7 of the Office Action claims 1-16 were rejected under 35 U.S.C. §112, second paragraph.

The claims have been editorially amended and now do comply with 35 U.S.C. §112, second paragraph.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the rejection of the claims under 35 U.S.C. §112.

**Second Rejection**

Claims 1 and 3-6 as best understood were rejected under 35 U.S.C. §102(b) as being anticipated by Noel et al. (U.S. 5,718,101). This rejection is traversed.

The invention described in Noel et al. concerns packaging, storing and shipping of meat products in a low-oxygen environment for extended shelf-life and then displaying for consumer sale in a relatively high-oxygen environment such that the meat is caused to "bloom" into a red color just before placed in a retail display case. The invention described in Noel et al. is based on so-called dual-lid packaging scheme, i.e. providing the package with a

discrete, dual, removable film. The first film being a gas permeable film covering the package in immediate vicinity thereto and the second one being a gas impermeable film, laying over the first film. The upper film provides barrier to oxygen during storing and shipping and may be then removed to expose the lower film to oxygen, when it is required to place the package with meat product for retail display.

One can assume that this dual-lid scheme, employed in Noel et al. would be absolutely unnecessary, totally irrelevant and even forbidden for such food products, which should retain their color and not to degrade in the presence of oxygen.

The packaging method, disclosed in Noel et al. comprises positioning the first gas permeable film over the package, securing a portion thereof to a flange of the package to enclose the product, elevating a portion of the web to facilitate its further severing and then severing the film at the elevation portion to separate it from the remainder of the film. The method comprises also evacuating of air from the package and filling the package with a flushing gas, which is lower in oxygen content than air. This step is carried out within a closed chamber, connected to a source of vacuum and of flushing gas. The step of evacuating and flushing is carried out after the gas-permeable film is positioned over the package however before it is secured thereto. After the gas-permeable film has been secured and severed a second, gas-

impermeable film is positioned over the package and then secured to the flange of the package and severed.

It can be assumed that apparently no distance is provided between the first gas-permeable film, which is positioned over the package and that evacuating and filling by flushing gas becomes possible at least partly due to permeability of the first film.

The packaging apparatus disclosed in Noel et al. is provided with two chamber closures, 52, 54 for insulating the apparatus from the ambient atmosphere during evacuating and flushing stage. The closures are provided with corresponding inlets 56 and outlets 58 and there are no inlets or outlets in the holder 12. The severing member 46 is displaceable within the chamber and not within the securing device 30. The film is secured on the flange by virtue of heat-shrinkage, after the film is secured by securing device 30. The heating can be carried out either by passing the lidded package with product therein through a shrink tunnel or by using severing device 46.

The present invention refers to a method and apparatus for packaging a product within a hermetically sealed container. This invention is based on a one-lead scheme, which employs only a sole, gas impermeable film.

The packaging method of the present invention comprises the step of formation of a confined space between the container body and the gas-impermeable film and then filling this space by a

replacement gas. During the filling stage the film is not positioned over the package (as in Noel et al.) but is deliberately kept at a distance therefrom in order to allow the replacement gas to enter the package. The replacement gas enters the space and exits to the ambient atmosphere immediate therefrom, since the confined space is in direct communication with the ambient atmosphere and it is not isolated therefrom by a chamber closures (as in Noel et al.).

The apparatus of the invention is not enclosed within any chamber and at least one gas inlet is arranged within the spacer member 130 and at least one outlet is arranged in the holder 104. The packaging apparatus of Noel et al. is enclosed within chamber closures 52, 54 and neither inlets are made in the spacer 44, nor outlets in the holder 12.

In the present invention the step of securing the film on the rim 107 is accomplished by virtue of heat-welding and not of heat-shrinking (as in Noel et al.). The heat welding is caused by a dedicated securing means, i.e. by the heat-sealing plate 160. The securing means 30 of the apparatus of Noel et al. is neither adapted, nor is intended for applying heat.

Thus in contrast to the Examiner's allegation the present invention is new over the Noel et al. The amended claims contain those features, which emphasize the novelty.

As the steps set forth in the independent claim 1 and the structure set forth in the independent claim 7 are not shown either specifically or inherently in the reference a rejection under 35 U.S.C. §102 is not viable. Additionally, there would be no motivating reason outside of the Applicant's own disclosure to modify the reference to arrive at the claimed steps and structure. Note the dependent claims are considered patentable at least for the same reasons as the independent claims.

For the reasons set forth above the Examiner is requested to reconsider and withdraw the rejection of the claims under 35 U.S.C. §102.

### Third Rejection

Claims 7-16, as best understood, were rejected under 35 U.S.C. §102(b) as being anticipated by WO '400 (WO 91/03400). This rejection is traversed.

The invention in accordance with WO '400 reference is intended for packaging perishable goods such as red meat. The apparatus disclosed in WO '400 contains a base 1, a lid 3, and a flexible web 5 made of gas permeable material held over the goods 7 so the goods are held to the base 1. A suitable gas is retained within the packaging, which can permeate the flexible web 5 to preserve red color of the goods 7. The gas mixture, employed in the apparatus is not an inert replacements gas intended for prevention of degradation of the food product (as in the present invention) but a

high oxygen gas mixture, which is suitable for rendering the meat its red color. In order to introduce the gas mixture into package a chamber means 67 is employed, in which the package resides during the stages of evacuating of air and supplying the gas mixture. The method and apparatus provide that the flexible web 5 is held between a pair of web holding means 65 and stretched towards the goods 7 to be in immediate contact with them as the upper lid 3 is moved to close the package. In contrast to the Examiner's allegation there is no space exists between the container and the film (as in the present invention).

As it has been already explained above the present invention is not intended for rendering red color to meat by virtue of exposure to high oxygen gas, the present invention employs a sole, gas-impermeable, heat weldable film, the foodstuff is exposed to low-oxygen replacement gas, preserving the foodstuff from degradation, and there is no chamber for evacuating of air from the content of the package.

Thus the present invention as set forth in amended claims 7-16 is novel over the WO '400 reference. Also there would be no motivating reason to modify the reference without benefit of the present disclosure.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the rejection under 35 U.S.C. §102.

**Fourth Rejection**

Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Noel et al. (U.S. Patent 5,718,101) in view of Grune et al. (U.S. Patent 5,071,667).

Initially Grune et al. does not cure the inherent deficiencies of the rejection based on Noel even though a rejection was made under 35 U.S.C. §103.

The Examiner is using a speculation to provide the rejection. The Noel et al. reference teaches intentionally exposing the foodstuff to a high oxygen environment when the first lid is removed. Since the foodstuff will be exposed to the environment via gas-permeable film it thus will "bloom" due to interaction with the environment.

Grune et al. teaches a method of preserving foodstuff by complete expelling air from foodstuff containers and by sealing them by gas-impermeable metallic or plastic foil.

It can be readily understood by one skilled in the art that Noel et al. teaches away from Grune et al. and it would not have been obvious to a person skilled in the art to have modified the method of Noel et al. by having pasty material to be gas treated as thought by Grune et al.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the rejection under 35 U.S.C. §103.



CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for two (2) months extension of time for filing a reply in connection with the present application, and the required fee of \$410.00 is attached hereto.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 

Charles Gorenstein, #29,271

P.O. Box 747

Falls Church, VA 22040-0747

(703) 205-8000

CG/EAG/ndb  
2786-0186P

Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Amended) A method for packaging a product in a hermetically sealed container having a cup-shaped rigid or semi-rigid body (106) provided with a rim (107) fitted with a closure 200 (124), the method comprising:
- i) introducing the product into said (cup-like shaped) body (106);
  - ii) forming proximate to the rim (107) an confined isolated space (204), said space having with at least one gas inlet (134) and at least one gas outlet (112), the said space (204) being defined between said body (106) and a closure-forming, substantially gas-impermeable membrane member (200), said confined space being -formed adjacent to the rim and at a distance therefrom and with a clearance from said rim (107);
  - iii) introducing a replacement gas through said inlet (134) into said confined space (204) to replace at least a substantial portion of gas originally contained in said isolated space 204 the container body (106); and

- iv) relative displacem~~ent~~ ~~at least one of said body~~  
(106) or and (said closure-forming member) (200)  
~~towards the each other of the two members to close~~  
~~said clearance and to attach~~ bring the closure-  
forming member ~~membrane~~ (200) in contact with ~~to~~  
said rim (107), and
- v) hermetically attaching the two to one another  
membrane(200) to the rim to form a gas-tight seal  
therebetween.

2. A method according to Claim 1, wherein said product is a  
pasty material.

3. A method according to Claim 1 or 2, wherein said product is  
a food product.

4. (Amended) A method according to Claim 1, wherein the  
closure-forming ~~member~~ membrane (200) is a plastic film.

5. (Amended) A method according to Claim 1, wherein said  
confined space (204) is brought in communication with the  
external atmosphere via the said gas outlet (112) ~~is formed~~  
~~by bores 211 leading from the isolated space 204 to the~~  
~~external atmosphere.~~

6. (Amended) A method according to Claim 1, wherein said  
confined space (204) is brought in communication with a  
vacuum forming means (604) via the said gas outlet ~~the gas~~

~~outlets are bores 312 in gas communication with a vacuum source 604.~~

7. (Amended) An apparatus for forming a hermetically sealed product-containing container, the container having an essentially cup-like shaped body (106) with rims (107) fitted with a closure (200124); wherein said container is not filled entirely by the product not filling the entire container leaving such that a residual space (210) remains between the product and the rim residual space 204 therein;

the apparatus comprising:

- a holder (104) for holding said container body (106);
- a spacer member (130), having a central opening (132),
- a means for brining the spacer member into sealing engagement against the holder and against a closure-forming substantially gas-impermeable membrane (200), and having an opening 137, member the arrangement being such that in the sate of sealing engagement the inwardly facing wall of said central opening (132), said the container body (106), the holder (104) and said the closure-forming member membrane (200), define together the a confined space (204), said space is adjacent to the rim (107) and at a distance therefrom;
- at least one gas inlet (134) and at least one gas outlet (112) for introducing a replacement gas into said isolated

confined space (204), and exhausting gas therefrom,  
~~respectively; and replacing at least a substantial portion of~~  
gas originally contained in the container body (106);

- a sealing mechanism comprising a displacing arrangement  
for displacing one or both of said container body (106) and  
said closure-forming member-membrane (200) towards one  
another and attaching them to one another in a gas-tight  
fashion.

8. (Amended) An apparatus according to Claim 7, wherein said  
holder (104) has an opening (108) for receiving the body (106)  
of the container.

9. (Amended) An apparatus according to Claim 8, wherein the  
opening (108) of the holder (104) is fitted with an axially  
projecting skirt (110) for engagement with ~~a~~ the rim (107) of  
the container (106).

10. (Amended) An apparatus according to Claim 7, wherein said  
gas outlet (112) is formed in the holder (104) and comprises is  
~~provided with bores 112, through going bores serving as gas~~  
~~outlets.~~

11. (Amended) An apparatus according to Claim 7, wherein said  
gas inlet (134) is formed in the spacer member (130) has gas  
~~inlet and comprises nozzles 134 formed so they open into said~~  
~~opening 132 for introducing a replacement gas into~~ (the confined  
space (204) a sealed space).

12. (Amended) An apparatus according to Claim 7, wherein said sealing mechanism is capable to bring ~~displaces~~ said closure-forming member membrane (200) ~~to sealingly engage said rims 107~~ into sealing engagement with the rim (107) through the central opening (132) ~~152~~ of said spacer member (130).

13. (Amended) An apparatus according to Claim ~~17~~ 17, wherein said closure- forming membrane member (200) is a heat weldable continuous film ~~200~~, ~~said container body 106 is made of a heat-weldable plastic material and the engagement of the film to the container body's rim is by means of heat welding.~~

14. (Amended) An apparatus according to Claim 13, comprising a trimming member (180) for trimming edges of the film (200) ~~after brought into sealing engagement with the rim (107) the~~ heat welding.

15. (Amended) An apparatus according to Claim ~~710~~ 10, wherein said gas inlet comprises nozzles (334) made in the spacer member (130) for introducing a replacement gas into confined space (204) ~~and gas outlet is connected to a vacuum source 606~~ a bottom surface of said holder (304) is in sealing engagement with a vacuum-forming cup (604) and wherein said gas outlet is in communication with the vacuum-forming cup.

16. (Amended) An apparatus according to claim 14, in which said sealing mechanism is provided with a heat sealing plate (160) wherein the trimming member (180) and a the heat sealing

plate 160 of the sealing mechanism are axially displaceable  
towards the closure-forming membrane (200) through ~~an~~ the  
central opening (132) in the spacer member (130).

B<sup>12</sup>